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# DEPARTMENT OF THE AIR FORCE

## JUSTIFICATION OF FISCAL YEAR 1991 BUDGET ESTIMATES

SUBMITTED TO CONGRESS JANUARY 1990

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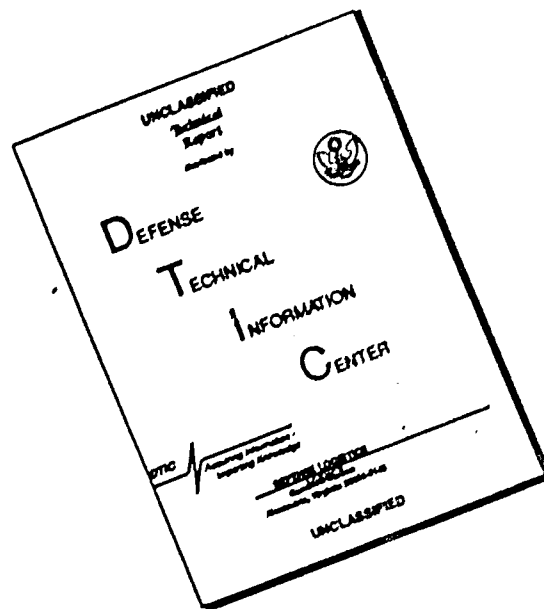


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Missile Procurement, Air Force

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# DEPARTMENT OF THE AIR FORCE

## TABLE OF CONTENTS

### MISSILE PROCUREMENT, AIR FORCE

Appropriation Language.....	1
Program and Financing.....	2
Object Classification.....	4
Budget Activity Justification:	
Ballistic Missiles.....	5
Other Missiles.....	8
Modification of In-Service Missiles.....	17
Spares and Repair Parts.....	22
Other Support (E-G).....	26
Comparison of FY 1990 Program Requirements and Financing.....	33
Comparison of FY 1989 Program Requirements and Financing.....	36

STATEMENT "A" per Mr. M. Fritsch  
SAF/FBPC  
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## MISSILE PROCUREMENT, AIR FORCE

For construction, procurement, and modification of missiles, spacecraft, rockets, and related equipment, including spare parts and accessories therefor, ground handling equipment, and training devices; expansion of public and private plants, Government-owned equipment and installation thereof in such plants, erection of structures, and acquisition of land, for the foregoing purposes, and such lands and interests therein, may be acquired and construction prosecuted thereon prior to approval of title; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes including rents and transportation of things: [\$6,916,863,000] \$9,005,700,000 to remain available for obligation until September 30, [1992] 1993.

Missile Procurement, Air Force  
Program and Financing (in Thousands of dollars) SUMMARY

Identification code	57-3020-0-1-051	Budget plan (amounts for PROCUREMENT actions programmed)				Obligations			
		1989 actual	1990 est.	1991 est.	1989 actual	1990 est.	1991 est.		
Program by activities:									
Direct program:									
00.0101	Ballistic missiles	841,394	886,359	1,885,007	1,085,392	922,074	1,526,926		
00.0201	Other missiles	1,498,035	1,353,217	2,125,468	1,409,522	1,712,878	2,109,645		
00.0301	Modification of inservice missiles	140,079	77,057	111,273	94,981	116,736	108,336		
00.0401	Spares and repair parts	231,907	183,796	271,355	289,097	152,859	217,373		
00.0501	Other support	4,435,048	4,089,185	4,612,597	4,512,687	3,742,208	4,459,157		
00.9101	Total direct program	7,146,461	6,589,614	9,005,700	7,391,679	6,646,755	8,421,437		
01.0101	Reimbursable program	256,099	251,772	251,800	244,174	267,982	251,800		
10.0001	Total	7,402,560	6,841,386	9,257,500	7,635,853	6,914,737	8,673,237		
Financing:									
Offsetting collections from:									
11.0001	Federal funds(-)	-244,221	-247,672	-247,500	-241,914	-247,672	-247,500		
13.0001	Trust funds(-)	-11,878	-4,100	-4,300	-12,048	-4,100	-4,300		
14.0001	Non-Federal sources(-)				-60,941				
17.0001	Recovery of prior year obligations								
21.4002	Unobligated balance available, start of year:								
21.4003	For completion of prior year budget plan	-103,000	-44,177	-131,000	-2,721,274	-2,481,302	-2,407,951		
21.4009	Available to finance new budget plans	-85,478			-103,000	-44,177	-131,000		
22.4001	Reprogramming from/to prior year budget plan	119,223	44,177		119,223	44,177			
22.4001	Unobligated balance transferred to other acc								
24.4002	Unobligated balance available, and of year:								
24.4003	For completion of prior year budget plan	44,177	131,000		2,481,302	2,407,951	2,992,214		
25.0001	Available to finance subsequent year budget	49,255			44,177	131,000			
25.0001	Unobligated balance lapsing				49,255				
39.0001	Budget authority	7,190,838	6,720,614	8,874,700	7,190,838	6,720,614	8,874,700		
Budget authority:									
40.0001	Appropriation	7,219,833	6,916,863	9,005,700	7,219,683	6,916,863	9,005,700		
40.0004	Reduction pursuant to P.L. 100-463	-3,002			-3,002				
40.0005	Reduction pursuant to P.L. 101-165		-153,108			-153,108			
41.0001	Transferred to other accounts(-)	-28,043	-43,141		-26,043	-43,141			
41.2201	Transferred to other accounts (unob bal)			-131,000			-131,000		
43.0001	Appropriation (adjusted)	7,190,638	6,720,614	8,874,700	7,190,838	6,720,614	8,874,700		

Missile Procurement, Air Force  
Program and Financing (in Thousands of dollars) SUMMARY

Identification code	57-3020-0-1-051	1989 actual	1990 est.	1991 est.
Relation of obligations to outlays:				
71.0001	Obligations incurred, net	7,381,896	6,662,965	8,421,437
72.4001	Obligated balance, start of year	11,317,589	11,292,592	10,743,457
74.4001	Obligated balance, end of year	-11,292,592	-10,743,457	-12,047,394
77.0001	Adjustments in expired accounts (net)	2,984		
78.0001	Adjustments in unexpired accounts	-60,941		
90.0001	Outlays	7,348,936	7,212,100	7,117,500

Missile Procurement, Air Force  
Object Classification (in Thousands of dollars) SUMMARY

Identification code	57-3020-0-1-051	1989 actual	1990 est.	1991 est.
Direct obligations:				
131.001 Equipment		7,391,679	6,646,755	8,421,437
199.001 Total Direct obligations		7,391,679	6,646,755	8,421,437
Reimbursable obligations:				
231.001 Equipment		244,174	267,982	251,800
299.001 Total Reimbursable obligations		244,174	267,982	251,800
999.901 Total obligations		7,635,853	6,914,737	8,673,237

ACTIVITY: 1. Ballistic Missiles

(In Thousands of Dollars)

FY 1991 Estimate	1,885,007
FY 1990 Estimate	886,359
FY 1989 Actual	841,394

SECTION I - PURPOSE AND SCOPE

This activity provides for complete operational intercontinental ballistic missiles, including the airframe structure and installed power units, communications guidance and control equipment, re-entry vehicle (excluding nuclear payloads), instruments and auxiliary equipment installed in the missiles, and penetration aids. It also provides for peculiar support equipment in direct support of operational ballistic missiles including ground guidance and control systems, equipment to maintain the operational status of the system, specialized ground handling equipment, and system trainers. The ground equipment is used to transport, assemble and disassemble, maintain, checkout, launch, and guide ballistic missiles. Specialized training equipment includes system trainers for proficiency training of maintenance and operator crews. This activity also provides for the modernization of the ballistic missile launch and launch control facilities and the integration of new equipment into the launch control center. It includes hardware, training equipment, data and site activation effort required to modernize ballistic missile facilities. Also included is replacement equipment for ballistic missile weapon systems. Replacement equipment requirements provide for peculiar support equipment for out-of-production systems, equipment common to several systems, and equipment required by specialized repair activities.



SECTION II - JUSTIFICATION OF FUNDS REQUESTED

PEACEKEEPER

(In Thousands of Dollars)			
<u>FY 1990</u>		<u>FY 1991</u>	
<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
12	832,467	12	1,861,019

The Peacekeeper is a four-stage ICBM having multiple independently targetable warheads with much greater accuracy than previous ballistic missiles. The first 50 Peacekeeper missiles are deployed in Minuteman silos. Peacekeeper subsystems provide the following improvements over existing Minuteman missiles: an advanced guidance set for improved accuracy; an advanced solid propellant; lightweight motor cases; and advanced rocket motor nozzles. Funds are requested in FY 1991 for procurement of 12 missiles, and associated support equipment. The FY 1991 request includes funding for basing set materials to support deployment of missiles in rail garrisons subject to Congressional approval.

REPLACEMENT EQUIPMENT - STRATEGIC (BALLISTIC)

(In Thousands of Dollars)

<u>FY 1990</u>		<u>FY 1991</u>	
<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
-	58,892	-	23,988

Replacement equipment includes items to replace peculiar and common support equipment worn out or damaged beyond economical repair and common items required for new ballistic missile systems entering the inventory. It provides for the replacement of organizational and base level missile support equipment.

ACTIVITY: 2. Other Missiles

	(In Thousands of Dollars)
FY 1991 Estimate	\$2,125,468
FY 1990 Estimate	\$1,353,217
FY 1989 Actual	1,498,035

SECTION I - PURPOSE AND SCOPE

This activity provides funds for procurement of strategic air-to-ground cruise missiles, tactical ground-to-ground cruise missiles, tactical air-to-air, air-to-ground and ground-to-air missiles, target drones, missile replacement equipment and industrial facilities. Weapon system cost includes flyaway costs (airframe, propulsion equipment, electronics and armament), peculiar support equipment (PSE), system peculiar training equipment and publications, and technical data.

SECTION II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1991 budget request includes funds for the procurement of the Advanced Cruise Missile, Have Flag, Tacit Rainbow, Imaging Infrared (IIR) Maverick, HARM, target drones, Short Range Attack Missile II (SRAM II), Sidewinder, Advanced Medium Range Air-to-Air Missile (AMRAAM), HAVE NAP, Missile Replacement Equipment, and Industrial Facilities.

## Strategic Missiles

### ADVANCED CRUISE MISSILE

(In Thousands of Dollars)

<u>FY 1990</u>		<u>FY 1991</u>	
<u>Qty</u>	<u>Amount</u>	<u>Qty</u>	<u>Amount</u>
100	315,202	100	473,269

The Advanced Cruise Missile (ACM) is a low-observable air-launched cruise missile. ACM incorporates substantial improvements in survivability, range, accuracy, and targeting flexibility over current inventory assets. It is being tested for use on both the B-52H and the B-1B aircraft.

Have Flag - Information concerning this program is included in classified budget documentation material.

### Tacit Rainbow

(In Thousands of Dollars)

<u>FY 1990</u>		<u>FY 1991</u>	
<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
-	-	-	227,441

The Tacit Rainbow is a low-cost, programmable, loitering missile system to search out and attack emitting radars. This system provides the capability to defeat/suppress the enemy's ability to acquire and attack friendly forces. The 1991 request is for \$227.4 million. The quantity to be procured with this amount is provided in classified budget documentation.

HAVE NAP

(In Thousands of Dollars)			
<u>FY 1990</u>		<u>FY 1991</u>	
<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
22	23,431	26	25,799

HAVE NAP is an air-to-ground, medium range, precision guided missile currently operational in the Israeli Air Force. The weapon system is planned to be employed on Strategic Air Command (SAC) B-52's as a standoff conventional weapon against designated high value point and defense suppression targets.

SRAM II

(In Thousands of Dollars)			
<u>FY 1990</u>		<u>FY 1991</u>	
<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
-	10,791	-	21,210

The SRAM II is an improved nuclear air-to-surface missile developed to replace the SRAM A. The system will be capable of penetrating advanced defensive threats to strike hard and relocatable targets from standoff ranges. Primary carrier aircraft are the B-1B and B-2. FY 1991 supports nonrecurring costs at the prime contractor's plant and funds advance procurement of long leadtime materials.

Tactical Missiles  
AIM-9M Sidewinder

(In Thousands of Dollars)

	FY 1990	FY 1991		
	QTY	AMOUNT	QTY	AMOUNT
	-	452	-	420

Developed as a joint Navy/Air Force effort, the AIM-9M is the latest version of heat-seeking, infrared missiles forming the SIDEWINDER family. The AIM-9M is a short-range, air-to-air missile designated to retain all demonstrated guidance performance characteristics of the AIM-9L, while significantly reducing operational limitations of the AIM-9L when used against infrared countermeasures and clutter backgrounds. The 1991 request continues support of AIM-9M production program.

AGM-65D/G MAVERICK

(In Thousands of Dollars)

	FY 1990	FY 1991		
	QTY	AMOUNT	QTY	AMOUNT
	2,270	168,658	-	7,325

The AGM-65D and G missiles are rocket-propelled, air-to-surface, precision-guided tactical missiles with a "stand-off" launch and leave capability. The missiles are guided by tracking signals developed from the naturally occurring thermal energy of the target. The AGM-65D has a (125 lb) conical shaped charge warhead, which is detonated by a contact fuze mechanism. The AGM-65G is essentially the same as the "D" version only it employs a larger (300 lb) high explosive warhead. Both the AGM-65D and G missiles incorporate imaging infrared (IIR) guidance compatible with all TV MAVERICK capable aircraft and target acquisition systems that are being planned for tactical aircraft. The FY 1990 program completes procurement of Maverick missiles. The FY 1991 request continues support of the Maverick production program.

AGM-88A HARM

(In Thousands of Dollars)

	<u>FY 1990</u>		<u>FY 1991</u>
<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
326	76,489	120	30,315

The Advanced High-Speed Anti-Radiation Missile (HARM) is an air-to-surface missile that is guided to enemy radar sites by homing in on emitting signals. HARM characteristics include software flexibility, inflight retargeting, high speed, large launch envelope, wide band coverage in a single head, high sensitivity and compatibility with both Air Force and Navy tactical aircraft. The increased sophistication, concentration and lethality of enemy ground based, radar guided, missile and anti-aircraft artillery systems threaten the ability of tactical aviation to accomplish its mission and survive. HARM provides a lethal counter to this threat. An alternate guidance section, the Low Cost Seeker, is in test. Once qualified, the seeker portion of the HARM will be competitively procured. 120 missiles to be procured in 1991 will all be Low Cost Seeker-equipped HARMs.

Advanced Medium Range Air-to-Air Missile (AMRAAM)

(In Thousands of Dollars)

	<u>FY 1990</u>		<u>FY 1991</u>
<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
815	687,776	1,250	893,382

Developed jointly by the Air Force and Navy, the AMRAAM is an air-to-air missile with significant improvements in operational utility and combat effectiveness over the AIM-7F/M Sparrow missile. It is a radar guided, all-weather, all-environment, beyond-visual-range, air-to-air missile compatible with the F-14, F-15, F-16 and F-18. It will have a performance envelope significantly improved over the AIM-7F/M, increased missile velocity, a "launch and maneuver" employment capability, and the capability for multiple target attack during a single intercept. The 1991 request procures 1,250 AMRAAMs.

### Target Drones

(In Thousands of Dollars)

	<u>FY 1990</u>	<u>FY 1991</u>		
	<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
	49	22,497	115	46,404

Target drones are remotely piloted vehicles used to simulate threat aircraft during test and evaluation of air-to-air missiles. Both full-scale and subscale targets with associated augmentation, scoring and countemeasures devices are required. Funding in 1991 procures 48 QF-106 full-scale drones and 67 subscale BQM-34A drones.

### Industrial Facilities

(In Thousands of Dollars)

	<u>FY 1990</u>	<u>FY 1991</u>		
	<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
	-	13,945	-	16,211

These requirements represent the Air Force's effort, in cooperation with industry, to ensure the defense industrial base is capable of producing peacetime weapon systems in a cost-effective and efficient manner. Industrial facilities includes the missile/space sector segment of an industrial base program that ensures the ability of the base to accelerate deliveries in times of national emergencies in order to meet sustainability requirements. It includes funding for a broad range of industrial acquisition tools that also dramatically impact peacetime procurement. Modernization, productivity, the operations at the 13 government owned-contractor operated plants and at hundreds of civilian contractor locations that all make up the defense industrial base are becoming a more and more essential ingredient to national deterrence. Studies by the Services and the Joint Chiefs of Staff have repeatedly proven that



the industrial base will not support mobilization demands in a timely manner without some advance analysis and preparation. In 1991, \$16.2 million is required to support facilities projects, industrial base planning, and industrial productivity and responsiveness.

Replacement Equipment

(In Thousands of Dollars)

<u>FY 1990</u>		<u>FY 1991</u>	
<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
-	2,045	-	2,620

Requirements for replacement equipment provide for peculiar support equipment for weapon systems that are no longer in production, equipment common to several systems, and equipment required by specialized report activities. In FY 1991 the funding is required to procure replacement equipment for the AIM-7 SPARROW, AIM-9 SIDEWINDER, AGM-65A MAVERICK, AGM-69A SRAM, and ALOM.

1 COMPONENT USAF	FY 1991 FACILITY PROJECT DATA		2 DATE 27 Jun 89	
3 INSTALLATION AND LOCATION Air Force Plant 44 Tucson AZ		4. PROJECT TITLE MPC 7000 (Alteration) REPL HOLDING/BRINE BEDS-PHI		
5 PROGRAM ELEMENT  78011F	6 CATEGORY CODE  222222	7. PROJECT NUMBER	8. PROJECT COST (\$000)  5100	
9. COST ESTIMATES				
ITEM	U/M	QUANTITY	UNIT COST	COST (\$000)
Repl Holding Ponds & Brine Beds-Ph 1 (Construct two 1 million gallon above ground tanks)	EA	2	2410	\$4820
Construction Reserve (5%)				241
Total Facility Cost				5061
Total Facility Cost (rounded)				\$5100
10 DESCRIPTION OF PROPOSED CONSTRUCTION <p>Construct (2) 1,000,000 gallon above ground tanks with secondary containment and monitoring systems along with the associated piping and pumping systems to eliminate the need for either holding ponds or evaporative beds.</p> <p><b>BASIS OF NEED:</b>  The United States Congress has enacted "land ban" legislation prohibiting the land treatment, storage &amp; disposal of a wide range of chemicals. The Environmental Protection Agency accordingly enacted the 40 CFR 268 regulations codifying Congress' legislation. The stated intent of this legislation is to minimize and, if possible, eliminate the use of land disposal, including surface impoundments.</p> <p><b>IMPACT IF NOT PROVIDED:</b>  Failure to approve this project could result in the noncompliance of RCRA Section 1003.A-6 whose objective is minimizing the generation of hazardous waste &amp; the Land disposal of hazardous waste by encouraging process substitution, materials recovery, properly conducted recovery, recycling, reuse and treatment.</p>				

1 COMPONENT USAF		2 DATE FY 19 <u>91</u> FACILITY PROJECT DATA			27 Jun 89
3 INSTALLATION AND LOCATION Air Force Plant 44 Tucson AZ			4. PROJECT TITLE MPC 7000 (Alteration) ACID WASTE/ALKALINE SOL SYS		
5 PROGRAM ELEMENT 78011F	6 CATEGORY CODE 222222	7 PROJECT NUMBER N/A	8. PROJECT COST (\$000) 1898		
<b>9 COST ESTIMATES</b>					
ITEM	U/M	QUANTITY	UNIT COST	COST (\$000)	
Upgrade Concentrated Acid Waste/ Concentrated Alkaline Solution System Industrial Waste Treatment Plant	LS	---	---	\$1808	
Project Reserve (5%)				90	
Total Project Cost				1898	
Total Project Cost (rounded)				\$1898	
<b>10 DESCRIPTION OF PROPOSED CONSTRUCTION</b>					
<p>Upgrade the concentrated alkaline solution (CAS) and the concentrated acid waste (CAW) batch treatment systems by upgrading technologies to allow for the most efficient and safe process to neutralize solutions, reduce hexavalent chromium, and destroy cyanide to limits below land ban standards. Install a wet air oxidation system or similar system, for proper destruction of cyanide waste prior to the proposed dewatering of concentrated brines.</p> <p><b>BASIS OF NEED:</b> By primary reduction of hexavalent chromium, the need for stabilization during the sludge removal and process phase of treatment will be reduced as the chromium would be treated to meet the land ban requirements.</p> <p>Concentrated materials will then be processed through the sludge solidification system to comply with the land ban regulations.</p> <p><b>IMPACT IF NOT PROVIDED:</b> Failure to approve this project will result in noncompliance with land ban regulations found at 40 CFR 268, and could result in civil/criminal litigation. It will also result in the inability to manage the CAW/CAS waste stream within the surface impoundments.</p>					

ACTIVITY: 3. Modification of In-service Missiles

	(In Thousands of Dollars)
FY 1991 Estimate	\$234,600
FY 1990 Estimate	77,057
FY 1989 Actual	140,079

SECTION I - PURPOSE AND SCOPE

This activity provides for modification of missile systems and drones, direct ground support equipment, missile training equipment, and components for this equipment. These costs include modification kits, revised handbooks, and engineering effort. These programs are designed to improve reliability, enhance performance, and increase maintainability by incorporating approved modifications resulting from technical advances, service use, and continuing test programs.

SECTION II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1991 missile modification program consists of Class IV modifications necessary for safety improvements, extension of service life or correction of material deficiencies, and Class V modifications that incorporate changes to enhance the operational capability of the fielded systems. Several Class III update modifications are also programmed to bring fielded missiles into line with production line configuration. Advances in technology and weapon system service life extensions necessitate the modification of in-service missile systems to enable strategic, tactical, and support forces to maintain superiority over hostile forces. In FY 1991, funding for installation is included with each modification as directed in the FY 1990 DOD Appropriations Bill.

HAVE NAP

(In Thousands of Dollars)	
<u>FY 1990</u>	<u>FY 1991</u>
\$997	-

The 1990 program of \$1.0 million provides for modification of the HAVE NAP missiles used in Initial Operational Test and Evaluation to comply with United States operational and safety standards.

LGM-30 Minuteman II/III Modification.

(In Thousands of Dollars)	
<u>FY 1990</u>	<u>FY 1991</u>
\$16,590	\$94,978

The FY 1991 request starts the Rapid Execution and Combat Targeting (REACT) mod to Minuteman III to replace equipment in all operational launch control centers.

AGM-65D Maverick.

(In Thousands of Dollars)	
<u>FY 1990</u>	<u>FY 1991</u>
\$9,968	\$3,238

The 1991 request continues a Class V modification for 825 AGM-65D missiles and depot support equipment for compatibility with the new digital autopilot and pneumatic actuation system. This modification updates operational capability for current pilot training.

AGM-88A, HARM Modification.

(In Thousands of Dollars)	
<u>FY 1990</u>	<u>FY 1991</u>
\$1,410	\$2,074

The FY 1991 program provides \$2.1 million to correct deficiencies revealed during operational testing and initial use. These corrections are incorporated into the production line at the earliest time, but systems that could not be corrected while in production must be corrected through the modification process.

AGM-86A, Air Launched Cruise Missile Modification.

(In Thousands of Dollars)	
<u>FY 1990</u>	<u>FY 1991</u>
\$3,886	\$3,733

The 1991 continues miscellaneous Class IV reliability/supportability updates.

Peacekeeper Modifications.

(In Thousands of Dollars)	
<u>FY 1990</u>	<u>FY 1991</u>
\$1,862	\$1,937

The FY 1991 program provide \$1.9 million for miscellaneous Class IV reliability and maintainability modifications.

Other (Modifications Under \$2.0 Million).

(In Thousands of Dollars)	
<u>FY 1990</u>	<u>FY 1991</u>
\$247	\$275

The FY 1991 program provide \$.3 million for miscellaneous Class IV modifications on the AIM-7F SPARROW, to improve reliability, maintainability and correct material deficiencies.



ACTIVITY: 4. Spares and Repair Parts

(In Thousands of Dollars)

FY 1991 Estimate	\$271,355
FY 1990 Estimate	183,796
FY 1989 Actual	231,907

SECTION I - PURPOSE AND SCOPE

This activity provides for procurement of initial spares and repair parts for ballistic missiles, other missiles, and target drones. Included are related provisioning documentation and spares for missile modification programs, peculiar support equipment and training equipment. Beginning in FY1991, the Air Force has instituted a new concept of management which transfers funding responsibility for replenishment spares from this central procurement account to the Air Force Stock Fund.

## SECTION II - JUSTIFICATION OF FUNDS REQUESTED

The 1991 funds are required for initial spares for weapon systems in production. Initial spares funding requirements are determined by applying standard factors which are based on historical experience. The factors are applied in accordance with type of weapon system, category of support (e.g. air vehicle, support equipment), number of weapon systems in production, production leadtimes, and recurring flyaway costs. Initial spares requirements are validated in the weapon system provisioning process for a specified support period. Replenishment spares include components and repair parts required for the continued support of missiles, drones and related support equipment maintained in the operational inventory.

### TOTAL BUDGET ACTIVITY 4:

#### SPARES AND REPAIR PARTS

	(In Thousands of Dollars)	
	<u>FY 1990</u>	<u>FY 1991</u>
	183,796	271,355
<u>INITIAL SPARES</u>	<u>FY 1990</u>	<u>FY 1991</u>
LGM-30 F/G Minuteman II/III	\$ 1,085	\$ 832
AIM-9M Sidewinder	11	13

AIM-120 Advanced Medium	10,836	22,105
Range Air-to-Air Missile (ANRAAM)	4,794	-
AGM-65D Imaging Infrared (IIR) Maverick		
AGM-88A High Speed		
Anti Radiation Missile (HARM)	4,533	3,260
LGM-118A Peacekeeper	1,343	158,686
Target Drones	4,908	3,719
AGM-136 Tacit Rainbow	-	3,898
HAVE NAP	1,296	2,084
AGM-130 Powered GBU-15	-	2,815
Rapier	-	25,125
Classified Programs	<u>9,371</u>	<u>21,533</u>

Subtotal	33,383	245,091
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MODIFICATION INITIAL SPARES		
AIM-9 Sidewinder	262	279
LGM-30 F/G MINUTEMAN II/III	100	23,871
OTHER PROGRAMS	<u>1,634</u>	<u>2,114</u>
Subtotal	<u>1,996</u>	<u>26,264</u>
TOTAL INITIAL SPARES	35,379	271,355

REPLENISHMENT SPARES

	<u>1990</u>	<u>1991</u>
AIM-7 Sparrow	2,343	-
AIM-9 Sidewinder	7,279	-
AIM-120 AMRAAM	6,921	-
AGM-65A Maverick	2,779	-
AGM-69A SRAM	2,985	-
AGM-86 ALOM	2,828	-
AGM-88A HARM	2,873	-
RAPIER	14,857	-
LGM-30 Minuteman	85,270	-
LGM-118A Peacekeeper	17,993	-
Target Drones	2,118	-
Classified Programs	<u>171</u>	<u>-</u>
Total Replenishment Spares	148,417	-

TOTAL BUDGET ACTIVITY 4:

SPARES AND REPAIR PARTS	183,796	271,355
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ACTIVITY: 5. Other Support

	(In Thousands of Dollars)
FY 1991 Estimate	\$4,612,597
FY 1990 Estimate	4,089,185
FY 1989 Actual	4,435,046

SECTION I - PURPOSE AND SCOPE

This activity provides for space programs and special programs. Space programs provide launch vehicles, satellites, peculiar ground support equipment, and miscellaneous launch support requirements other than those chargeable to the Operations and Maintenance appropriation. Special programs are of a sensitive nature and require special access.

SECTION II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1991 request of \$4,612,597 thousand includes \$1,240,687 for operational space programs and \$3,371,910 thousand for special programs.

### Communications Security (COMSEC)

(In Thousands of Dollars)

FY 1990		FY 1991	
QTY	AMOUNT	QTY	AMOUNT
-	20,540	-	7,621

This program provides communications security equipment for all critical spaceborne communications systems. Funds requested in this line procure COMSEC products for use in operational space programs. This program is an integral part of the national COMSEC program administered by the National Security Agency. FY 1991 funds provide for the procurement of peculiar anti-jam, data and command authentication encryption/decryption, authentication anti-jam, and weapon system security communication equipment for space and satellite programs.

### Navstar Global Positioning System (GPS) (MYP)

(In Thousands of Dollars)

FY 1990		FY 1991	
QTY	AMOUNT	QTY	AMOUNT
-	48,000	-	201,745

The operational Navstar GPS system will consist of 18 satellites in six orbital planes and 3 on orbit spare satellites, a ground control station and approximately 20,000 sets of user equipment for all services. Users (military aircraft, ships, ground vehicles, and ground personnel) will be able to precisely determine position (to 16 meters spherical probable accuracy worldwide) and velocity (.1 meters per second), in three dimensions and unimpaired by weather anywhere in the world. GPS's positional accuracy will significantly improve the effectiveness of reconnaissance, weapons delivery, mine countmeasures and rapid deployment for all services. The FY 1991 request provides funds to support the existing GPS Block II satellites as well as advance procurement funds to start acquisition of twenty GPS Block IIR replacement satellites on a multiyear basis.

### Space Shuttle Operations

(In Thousands of Dollars)

	FY 1990	FY 1991		
	QTY	AMOUNT	QTY	AMOUNT
	-	28,200	-	15,128

The Space Shuttle Operations program provides funds to support Air Force operational space programs launched on the Space Shuttle. In FY 1991 funds are requested for Inertial Upper Stage (IUS) technical support, Payload Assist Module-DII (PAM-DII) integration, and support equipment for Shuttle Operations.

### Defense Meteorological Satellite Program (DMSP) (MYP)

(In Thousands of Dollars)

	FY 1990	FY 1991		
	QTY	AMOUNT	QTY	AMOUNT
	1	116,607	1	147,719

DMSP is an advanced weather satellite system that provides timely, worldwide, high quality visible and infrared cloud imagery and other specialized meteorological, oceanographic and solar geophysical data to support DOD strategic missions. Worldwide data are provided to the Air Force Global Weather Central (Offutt AFB, Nebraska) and the Navy's Fleet Numerical Oceanography Center (Monterey, California). Local area cloud imagery data are transmitted for immediate use directly from the satellites to fixed and mobile Air Force and Navy tactical receiving terminals at key worldwide operating locations and onboard aircraft carriers at sea. The FY 1991 request procures satellite S-18 as part of the five space craft multiyear began in FY 1989, and sensors for satellites S18-20.

Defense Support Program (DSP) (MYP)

(In Thousands of Dollars)

FY 1990		FY 1991	
QTY	AMOUNT	QTY	AMOUNT
1	346,630	1	326,246

DSP satellites contain sensors which provide near real-time data to the National Command Authority and other designated users. Funds FY 1991 complete the 5 satellite multiyear procurement started in FY 1987. One satellite will be procured in this year.

Defense Satellite Communications System (DSCS) (MYP)

(In Thousands of Dollars)

FY 1990		FY 1991	
QTY	AMOUNT	QTY	AMOUNT
-	48,189	-	63,917

DSCS provides Super High Frequency (SHF) satellite communications for secure voice and high data rate transmissions. It satisfies unique and vital national security communications requirements for worldwide military command and control, crises management and relay of intelligence, early warning data, treaty monitoring and surveillance information and diplomatic traffic. The DSCS program consists of a space segment, which is an Air Force responsibility, a multi-user terminal segment for ground, airborne, and naval elements, and an operational control segment. The authorized DSCS space segment consists of five operational and two on-orbit spare satellites positioned in geosynchronous orbits to provide global (less polar) coverage. Existing DSCS II satellites will be replenished with DSCS III satellites. DSCS III provides increased capacity, flexibility, and counter-measure capability. DSCS III satellites will include an Air Force Satellite Communications System single channel transponder for Emergency Action Message dissemination. Funding in FY 1991 procures two Integrated Apogee Boost Subsystem assemblies



(IABS) to enable launch of two DSCS III satellites on the Atlas II launch vehicles. FY 1991 also finances general engineering support, satellite storage, and modification to DSCS satellites to allow use of the Atlas II.

Space Boosters (MYP)

(In Thousands of Dollars)			
FY 1990		FY 1991	
QTY	AMOUNT	QTY	AMOUNT
3	230,300	2	208,580

The Space Boosters program provides access to space for critical DOD payloads. FY 1991 funds two Titan IV launch vehicles as part of the multiyear procurement begun in FY 1987. Also funded are the associated solid rocket motor upgrades (SRMJs) at and associated aerospace ground equipment (AGE) Vandenberg's Air Force Base and Canaveral Air Force Station.

Medium Launch Vehicle (MLV)

(In Thousands of Dollars)			
FY 1990		FY 1991	
QTY	AMOUNT	QTY	AMOUNT
4	164,847	5	269,731

This program provides for competitive procurement of medium launch vehicles (MLVs). The Delta II will be used to launch medium weight satellites, such as the NAVSTAR GPS into orbit. The FY 1991 request finances three Delta II launch vehicles to launch NAVSTAR Global Positioning System (GPS) satellites and two Atlas II launch vehicles to launch DSCS satellites.

Nuclear Detonation Detection System (NDS)

(In Thousands of Dollars)			
FY 1990		FY 1991	
QTY	AMOUNT	QTY	AMOUNT
-	-	-	32,144

NDS provides the capability to detect, locate, and report nuclear detonations on a global basis near real-time. NDS sensor packages are employed on NAVSTAR Global Positioning System (GPS) satellites. FY 1991 funding provides advance procurement to initiate the multiyear procurement of NDS sensor suites for the next twenty GPS satellites.

Forest Green

(In Thousands of Dollars)			
FY 1990		FY 1991	
QTY	AMOUNT	QTY	AMOUNT
-	538	-	625

Information concerning this program is included in classified budget documentation material.

Special Programs

(In Thousands of Dollars)			
FY 1990		FY 1991	
QTY	AMOUNT	QTY	AMOUNT
-	3,062,166	-	3,101,796

Information concerning this program is included in classified budget documentation material.

Special Update Programs

(In Thousands of Dollars)

<u>FY 1990</u>		<u>FY 1991</u>	
<u>QTY</u>	<u>AMOUNT</u>	<u>QTY</u>	<u>AMOUNT</u>
-	231,168	-	237,345

Information concerning this program is included in classified budget documentation material.

COMPARISON OF FY 1990 PROGRAM REQUIREMENTS AS REFLECTED  
IN FY 1990 AMENDED BUDGET WITH FY 1990 PROGRAM REQUIREMENTS AS

SHOWN IN FY 1991 BUDGET

SUMMARY OF PROGRAM REQUIREMENTS

	(In Thousands of Dollars)			
	Program Requirements	Program Requirements		Increase (+) or Decrease (-)
	Per 1990 Amended Budget	Per 1991 Budget		
<u>BUDGET ACTIVITY</u>				
1. Ballistic Missiles	\$ 993,499	\$ 886,359		\$ -107,140
2. Other Missiles	1,567,968	1,353,217		-214,751
3. Modification of In-Service Missiles	115,647	77,057		-38,590
4. Spares and Repair Parts	259,411	183,796		-75,615
5. Other Support	4,445,675	4,089,185		-356,490
Reimbursable Program	<u>311,300</u>	<u>251,772</u>		<u>-59,528</u>
Total Fiscal Year Program	\$7,693,500	\$6,841,386		\$ -852,114

EXPLANATION OF CHANGES BY BUDGET ACTIVITY

1. Ballistic Missiles (-\$107,140). The Peacekeeper program and Peacekeeper. Advance Procurement are reduced a total of \$91,000 thousand pursuant to Section 9115 of the FY 1990 DOD Appropriation Act. Peacekeeper is reduced \$11,140 thousand and Replacement Equipment-Ballistic is reduced \$5,000 thousand for the Military Personnel Reprogramming.

2. Other Missiles (-\$214,751). Congress made the following adjustments (totalling -\$169,450 thousand): Advanced Cruise Missile (ACM) (-\$9,000 thousand), AMRAAM (-\$215,100 thousand), and AGM-88A HARM (+\$54,650 thousand). Also reflects reductions of -\$4,801 thousand for the Military Personnel reprogramming (Maverick -\$4,600 thousand, ACM -\$132 thousand, SRAM II -\$69 thousand); -\$2,500 thousand for a reprogramming to the Advanced Tactical Fighter (HARM -\$2,500 thousand); and reflects addition of \$17,000 thousand to be reprogrammed for the AGM-130. Additionally \$55,000 thousand of HARM funding has been placed on deferral by the Department.

3. Modification of In-Service Missiles (+\$38,590). Congress added \$37,500 thousand to this Budget Activity to finance the installation of modifications. These installations were previously funded in the O&M Appropriation. The Department has Deferred \$76,000 thousand for Minuteman Modifications. The adjustment also reflects a decrease of \$90 thousand for contractor travel pursuant to Section 9095 of the DOD Appropriations Act.
4. Spares and Repair Parts (-\$75,615). Congress reduced the FY 1990 Spares and Repair Parts by \$9,715 thousand. Also reflects a reduction for reprogramming to Military Personnel (-\$6,900 thousand). Reflects a reduction to \$59,000 thousand pursuant to Section 9115 of the FY 1990 DOD Appropriations Act.
5. Other Support (-\$356,490). The decrease is a result of Congressional actions (totalling -\$323,672 thousand) as follows: Global Positioning System (-\$16,291 thousand), Space Shuttle Operations (-\$16,400 thousand), Defense Support Program (-\$25,000 thousand) Space Boosters (-\$29,281 thousand), Medium Launch Vehicles (-\$9,600 thousand), Special Programs (-\$119,100 thousand) and Special Update (-\$108,000 thousand). Also reflects reduction of -\$3,018 thousand for the Congressionally directed contractor travel reduction; -\$17,000 thousand for a reprogramming for the AGM-130 (DMSP -\$11,000 thousand, GPS -\$6,000 thousand); -\$6,979 thousand for a reprogramming to Military Personnel (DMSP -\$2,373 thousand, DSCS -\$901 thousand, Space Shuttle Ops -\$1,466 thousand and Medium Launch Vehicles -\$2,239 thousand); and -\$5,821 for reprogramming to the Advanced Tactical Fighter from DMSP spread to each line item in the budget activity.

Reimbursable Program. Decrease is due to revised estimates of customer orders for a classified program.

COMPARISON OF FY 1990 FINANCING AS REFLECTED  
IN FY 1990 AMENDED BUDGET WITH FY 1990 FINANCING AS  
SHOWN IN FY 1991 BUDGET

	(In Thousands of Dollars)		
	Financing Per FY 1990 Budget	Financing Per FY 1991 Budget	Increase (+) or Decrease (-)
Program Requirements	\$7,693,500	\$6,841,386	\$ -852,114
Program Requirements (Service Account)	(7,382,200)	(6,589,614)	(-792,586)
Program Requirements (Reimbursable)	(311,300)	(215,772)	(-59,528)
Less:			
Anticipated Reimbursements	311,300	251,772	-59,528
Reduction due to P.L 101-165	-	-153,108	-153,108
Add:			
Transfer to Other Accounts	-	43,141	+43,141
Appropriation	\$7,382,200	\$6,916,863	\$ -465,337

EXPLANATION OF CHANGES IN FINANCING

The FY 1990 program has decreased \$852,144 thousand since submission of the FY 1990 Amended Budget.

Adjustments by category of financing are explained below:

1. Anticipated Reimbursements. An decrease of \$59,528 thousand is due to a decrease in customer orders for a classified program.
2. Reduction due to Public Law 101-165. The financing decreases \$150,000 pursuant to Section 9115 of the DOD Appropriations Act. This section directed the reduction from ICBM Modernization Programs. An additional \$3,108 thousand is reduced for Contractor Travel pursuant to Section 9095 of DOD Appropriations Act.
3. Transfer to Other Accounts. A reduction of \$43,141 thousand reflects transfer for Military Personnel, and the Advanced Tactical Fighter.

COMPARISON OF FY 1989 PROGRAM REQUIREMENTS AS REFLECTED  
IN FY 1990 BUDGET WITH FY 1989 PROGRAM REQUIREMENTS AS  
SHOWN IN FY 1991 BUDGET

SUMMARY OF PROGRAM REQUIREMENTS

	(In Thousands of Dollars)		
	Program Requirements	Program Requirements	Increase (+) or Decrease (-)
	Per 1990 Amended Budget	Per 1991 Budget	
<u>BUDGET ACTIVITY</u>			
1. Ballistic Missiles	\$ 851,455	\$ 841,394	\$ -10,061
2. Other Missiles	1,469,201	1,498,035	+28,834
3. Modification of In-Service Missiles	144,021	140,079	-3,942
4. Spares and Repair Parts	231,026	231,907	-881
5. Other Support	4,424,693	4,435,046	-10,353
Reimbursable Program	<u>315,000</u>	<u>256,099</u>	<u>-58,901</u>
Total Fiscal Year Program	\$7,435,396	\$7,402,560	\$ -32,836

EXPLANATION BY BUDGET ACTIVITY

- Ballistic Missiles (-\$10,061). Reflects a decrease of \$7,875 thousand for Special Operation Forces reprogramming (Peacekeeper -\$2,420 thousand and Replacement Equipment of \$5,455 thousand) and a below threshold reprogramming of -\$2,186 thousand from Replacement Equipment.
- Other Missiles (+\$28,884). The reduction is a net result of the following adjustment: rejection of AIM-7 for reprogramming (+\$28,999 thousand), reprogramming for Special Operations Forces (HARM -\$648 thousand, GLOM -\$2 thousand, Replacement Equipment -\$1,631 thousand, Target Drones -\$82 thousand) and a below threshold reprogramming net of +\$2,248 thousand.
- Modification of In-Service Missiles (-\$3,942). Changes reflect a reduction \$5,500 for transfer to the Coast Guard in ALCM Modifications and a below threshold reprogramming of \$1,558 thousand.

reflects return of funds originally scheduled for reprogramming.

5. Other Support (-\$10,353). Program reflects reprogramming to Special Operation Forces, -\$2,914 thousand (GPS -\$227 thousand, Space Shuttle Ops, -\$20 thousand, DMSP -\$25 thousand, DSCS -\$163 thousand, Space Boosters -\$1,702 thousand, Medium Launch Vehicles -\$777 thousand). Also reflects funds which were to be used for reprogramming which have not been used +\$13,267.

Reimbursable Program (+\$58,901). Program reflects change in requirements to support classified user.